EdgeAccess

CANOGA PERKINS

Universal Chassis System
Model UCS 1002
User Manual

NOTICE

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EdgeAccess®
Universal Chassis System
Model UCS 1002
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CAUTION!

This product may contain a laser diode operating at a wavelength of 1300 nm - 1600 nm. Use of optical instruments (e.g., collimating optics) with this product may increase eye hazard. Use of controls or adjustments, or performing procedures other than those specified herein may result in hazardous radiation exposure.

Under normal conditions, the radiation levels emitted by this product are under Class 1 limits in 21 CFR Chapter 1, Subchapter J.

ATTENCION!

Cet équipement peut avoir une diode laser émettant à des longueurs d'onde allant de 1300nm à 1600nm. L'utilisation d'instruments optiques (par exemple : un collimateur optique) avec cet équipement peut s'avèrer dangereuse pour les yeux. Procéder à des contrôles, des ajustements ou toute procédure autre que celles décrites ci-après peut provoquer une exposition dangereuse à des radiations.

Sous des conditions normales, le niveau des radiations émises par cet équipement est en dessous des limites prescrites dans CFR21, chapitre 1, sous chapitre J.

NOTICE!

This device contains static sensitive components. It should be handled only with proper ElectroStatic Discharge (ESD) grounding procedures.

NOTE!

Cet équipement contient des composants sensibles aux décharges électro-statiques. Il doit absolument être manipulé en respectant les règles de mise à la terre afin de prévenir de telles décharges.

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Chapter 1
Overview

The Model 1002 Universal Chassis System (UCS) Chassis houses and supplies power to Canoga Perkins modules that are 2U high. The UCS 1002 can be part of a managed domain of up to eight chassis; these can be a mix of UCS 1000 and UCS 1002. Figure 1 shows the UCS 1002 with these components:

- Chassis Interconnect Module (CIM), required in slot 0, provides alarm relays, connection to other chassis in the domain, and management through the chassis backplane; for details, see the *Model 1202 Chassis Interconnect Module User Manual*
- Domain Management Module (DMM), optional and recommended in slot 1, provides management for all chassis in the domain through a single IP addressable user interface screen; for details, see the *Model 1502 Domain Management Module User Manual* (or the *Model 1500 Domain Management Module User Manual* when the DMM is installed in the UCS 1000)
- Application modules, located in any slot from 1 through 14, such as fiber optic modems, multiplexers, or media converters
- Power Supply, can be one or two AC or DC supplies, or an AC supply and a DC supply; place the primary supply in slot 15 and the secondary supply in slot 14.

Figure 1. UCS 1002 Chassis

Power Supplies

You can use one or two AC and/or DC power supplies in the chassis; each power supply uses one slot. With one power supply, the chassis supports the CIM and up to 14 modules; with two power supplies, the chassis supports the CIM and up to 13 modules. For specifications for the power supplies, see Chapter 3.

An LED on each power supply lights green when the power is on. The chassis is a passive device that does not generate an alarm if the power fails. However, the CIM includes circuitry and alarm relay contacts that can route the alarm signal to an external device. The CIM forwards the power status to the DMM, which logs the power failure and sends an alarm trap; for details, see the user manuals for your CIM and DMM.

Chapter 2
Installing and Setting Up the Chassis

This section describes how to set up and install the chassis.

Before setting up the chassis, make sure these items are available:

- Chassis with application modules; the CIM is required and the DMM is optional
- Power cables; 14 or 16 gauge wire for DC power
- Contact wires for the Alarm Relays (optional)

Caution: ***Equipment intended only for installation in a RESTRICTED ACCESS LOCATION accessible only to electrically skilled persons and electrically instructed persons with the proper authorization.***

Follow these steps to install the chassis:

1. Plan the installation, considering these characteristics:

- Place the chassis within 7 ft. (2.134 m) of the power source.
- Plan to use one or more of these locations for the connection to Earth Ground:
  - The bonding lug on the rear of the chassis, near the bottom
  - The grounding prong on the AC power cord
  - The ground of the -48 VDC terminal strip
  - The mounting hardware for the rack, if the rack is tied to Earth Ground
- Place the chassis adjacent to other Canoga Perkins or related equipment.
- Allow room for the cable management bracket(s) that channel the cables, allowing slack in the cables and providing a surface for securing with a tie-wrap.

2. Unpack the chassis, cables, and modules, and inspect all parts for damage and compare them with the packing list. Set the packaging aside in case you need to return the equipment.

3. To connect or isolate the Signal and Chassis grounds, check the location of the lug installed between the backplane connectors for the power supplies, between slots 14 and 15. See Figure 2.

Caution: ***To avoid breaking the shorting lug, screw it in only finger tight.***

- To isolate the signal and chassis grounds, screw the lug into the hole with the round pad, labeled "CH_GND/SIG_GND ISOLATED." This is the factory default.
- To connect the signal and chassis grounds, screw the lug into the hole with the square pad, labeled "CH_GND/SIG_GND CONNECTED."

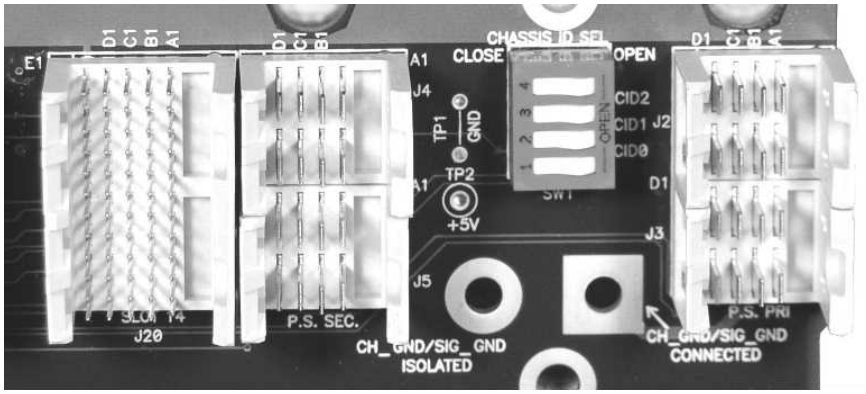

Figure 2. Chassis Backplane With CID Switch and Ground Options at Slots 14 and 15

4. Determine the number for this chassis within the domain, then locate the DIP switch inside the chassis on the backplane between the power supply connectors; see Figure 2. Check that the power is off, then use a non-conductive device to set the switches CID0, CID1, and CID2 according to the data in Table 1. The remaining switch is reserved.

Table 1. Chassis ID Switch Settings

Chassis ID Number	CID0	CID1	CID2
1	Closed	Closed	Closed
2	Open	Closed	Closed
3	Closed	Open	Closed
4	Open	Open	Closed
5	Closed	Closed	Open
6	Open	Closed	Open
7	Closed	Open	Open
8	Open	Open	Open

5. Plug the wire from Earth Ground into the lug on the back of the chassis; this connects the chassis to Earth Ground.

6. Mount the chassis in a standard 19-inch relay rack, in a 23-inch rack, or on a table top. The chassis ships with mounting brackets preconfigured for flush mounting in a standard 19-inch relay rack; you can reposition the brackets as needed.

   - For a 19-inch rack, position the chassis in the rack and secure the brackets to the rack with four screws. See Figure 1.
   - For a 23-inch rack, remove the mounting screws for the 19-inch mounting brackets and secure the optional 23-inch mounting bracket with the screws, then position the chassis in the rack and secure the brackets to the rack with screws.
   - For a tabletop, select a flat surface in a secure location, turn the chassis up-side-down and attach the self-adhesive feet near the four corners of the chassis, then turn the chassis right-side up and place it on the flat surface.

7. Install the power supply(s). Always place the primary power supply in slot 15. If you have a secondary power supply, place it in slot 14. See Figure 1. To install the power supply(s), follow these steps:

   a. Unplug the power cables or cord and turn the power switch off.

   b. Insert the power supply firmly into its slot, then secure the screws.

   - For an AC supply, plug the power cord into the front panel, then plug the cord into the power source.

Caution: ***To prevent damage to the power supply or power source, do not reverse polarity, and, if you use two DC power supplies, connect both DC sources to the same ground.***

   - For a DC supply, loosen the screws for the GND and VDC terminals on the front panel, then slide the wires under the square washers, and tighten the screws. See Figure 1. Check the polarity and use an ohmmeter to verify that -48 VDC is not shorted to GND. Replace the shield over the terminals on the front panel and connect the power cables to the power source.

Note: The connector for the ESD grounding strap on the front of each power supply connects to Earth ground through the chassis.

8. Insert the CIM in slot 0 and tighten the captive screw; see Figure 1. For details about connecting the cables for the alarm relays or the chassis link in the domain, see the *Model 1202 Chassis Interconnect Module User Manual.*

9. If you have an optional DMM, insert it in an unused slot (slot 1 is recommended) and tighten the captive screw; see Figure 1.

10. Insert the remaining modules into the chassis; for details, see the user manual for each module.

11. Install a cover on each unused slot.

12. Turn on the chassis power supply(s). All LEDs on all modules light amber during the power-on sequence, then the PWR LED lights green.

13. To configure each module in the chassis, see the user manual for that module.

Chapter 3
Specifications

Physical Specifications

Chassis dimensions	3.47" H x 17.39" W x 10.8 D" (88 mm x 442 mm x 274 mm)
Power supply dimensions	3.1" H x 1.6" W x 7.875" D (79 mm x 41 mm x 200 mm)
Chassis weight (unpopulated)	11.4 lbs. (5.17 kg)
Power supply weight	1102-2100, 1.50 lbs. (0.68 kg); 1102-2101, 1.34 lbs. (0.61 kg) 1112-2400 and 1112-2401, 0.66 lbs. (0.3 kg)
Power	
Redundancy:	Optional (AC/AC, DC/DC or AC/DC)
AC power supply (auto ranging), Model 1102-2100:	Input: 120 W, 100/240 VAC, 1.25 A, 50 to 60 Hz Heat dissipation, max: 410 BTU/hr Output: +5 VDC, 15 A, nominal
DC power supply, Model 1112-2400:	Input: 100 W, -36 to -75 VDC, 3.0 A max Heat dissipation, max: 341 BTU/hr Output: +5 VDC, 15 A, nominal
DC power supply, Model 1112-2401:	Input: 135 W, -36 to -75 VDC, 4.0 A max Heat dissipation, max: 462 BTU/hr Output: +5 VDC, 20 A, nominal
Environment	
Operating temperature:	0 to 50° C
Humidity:	10 to 95% (non-condensing)

Regulatory Compliance

- ETL, cETL (CAN/CSA-C22.2 No.60950/UL 60950)
- EN 60950
- EN 60825-1
- FCC Part 15B, Class A
- EN 55022
- EN 55024
- EN 61000-3-2, EN 61000-3-3
- R&TTE Directive (EN 300 386)
- C-Tick (AS/NZS 3548)
- NEBS Level 3
- CE Mark

Appendix A
Warranty Information

Current Warranty information is available on-line in the Client Login Area of the Canoga Perkins web site (www.canoga.com) or by contacting Technical Support at 800-360-6642 (voice) or fiber@canoga.com (email).

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